



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

MEMORANDUM:

To: Beth Fertich

From: Jennifer Urbanski, Ph.D.

A handwritten signature in black ink, appearing to read "Jennifer Urbanski", is written over the printed name.

Secondary Review: Julie Chao, MSPH

Date: 3/26/15

Subject: PRODUCT PERFORMANCE DATA EVALUATION RECORD

DP barcode: 425355

Decision no.: 498973

Submission no: 962655

Action code: R340

Product Name: F6570 EW Master Insecticide

EPA Reg. No. or File Symbol: 279-3347

Formulation Type: spray

Ingredients statement from the label with PC codes included: zeta-cypermethrin, PC Code 129064 (0.35%)

Application rate(s) of product and each active ingredient: varies based on use site; for the requested pests (ticks, mosquitoes, and fleas), 4 fl oz/gallon sprayed at 1 gallon/250 sq ft (0.04% a.i.)

I. Action Requested: Review one new study (MRID# 49542401) and one cited study (MRID# 49361201, previously reviewed in DP#419975) to support general mosquito, flea, and tick labeling claims.

II. Background: Cited MRID# 49361201 was previously reviewed for EPA Reg. #279-3289 under DP# 419975. The studies contained in this MRID were performed using EPA Reg. # 279-3347 and deemed acceptable. The registrant is submitting new data for the American dog tick (MRID # 49542401). The registrant would like to add general flea, mosquito, and tick claims using the data in the two aforementioned MRIDs to support these pests.

III. MRID Summary:

49542401. EW Efficacy Against American Dog Ticks.

(1) GLP or non-GLP? Non-GLP

(2) State the purpose and briefly summarize the methods and results: A study was conducted to test the efficacy of the test product (ZETA CYP EW, i.e. EPA Reg. # 279-3347) against *Dermacentor variabilis*, the American dog tick. Five treatments were tested: ZETA CYP EW diluted at 4 fl oz/gal sprayed at 1 gal/500 sq ft (0.01%); ZETA CYP EW diluted at 7.5 fl oz/gal sprayed at 1 gal/1000 sq ft (0.02%); ZETA CYP EW diluted at 15 fl oz/gal sprayed at 1 gal/1000 sq ft (0.04%); Bayer Advanced Home Pest plus Germ Killer (sodium o-phenylphenate 0.3% and beta-cyfluthrin 0.05%, EPA Reg. # 72155-80) sprayed at 1 gal/500 sq ft; and a water control sprayed to the point of runoff. For each treatment for each of four replicates, 10 adult ticks were placed in a plastic container containing filter paper and sprayed at the rates described above. Ticks were immediately transferred to clean containers, and knockdown and mortality were recorded at 1, 3, 5, 10, 15, and 20 minutes, and at 1, 2, and 24 hours post application. The study report combined knockdown and mortality in their summary statistics. The table below separates knockdown and mortality.

Table 1. Mean American dog tick % knockdown (KD) and % mortality (M)*.										
	ZETA (0.01%)		ZETA (0.02%)		ZETA (0.04%)		Bayer (+ control)		Water (- control)	
	KD	M	KD	M	KD	M	KD	M	KD	M
1 min	15%	0%	37.5%	0%	50%	0%	25%	0%	42.5%	0%
3 min	5%	0%	10%	0%	15%	0%	5%	0%	37.5%	0%
5 min	5%	0%	20%	0%	0%	0%	2.5%	0%	12.5%	0%
10 min	12.5%	0%	20%	0%	17.5%	0%	5%	0%	5%	0%
15 min	10%	0%	30%	0%	37.5%	0%	25%	0%	0%	0%
20 min	20%	0%	32.5%	10%	40%	5%	85%	0%	0%	0%
1 hr	55%	17.5%	50%	40%	47.5%	52.5%	37.5%	60%	0%	0%
2 hr	50%	47.5%	40%	60%	42.5%	57.5%	10%	87.5%	0%	0%
24 hr	45%	47.5%	45%	50%	42.5%	57.5%	5%	92.5%	2.5%	0%

*Note that some ticks classified as dead at one time point were later found to be alive/knocked down, and some ticks classified as knocked down later recovered.

(3) State conclusions as they relate to study results following your review of the primary efficacy review and the study materials: The data do not support the use of EPA. Reg. # 279-3347 to kill American dog ticks at any of the tested rates for ZETA CYP EW. Knockdown and mortality cannot be combined to achieve a kill claim, and mortality alone did not reach 90%.

(4) Is the study acceptable or not? Unacceptable.

IV. RECOMMENDATIONS:

The data do not support the use of the product to control American dog ticks and therefore a general tick label claim is not supported. The data previously reviewed (MRID # 49361201) support the use of the product to kill mosquitoes and fleas at a rate of 15 fl oz/gallon sprayed at 1 gallon/1000 sq ft. Therefore, the labeled rate of 4 fl oz/gallon sprayed at 1 gallon/250 sq ft is acceptable for kills claims against mosquitoes and fleas. Residual claims and quick kill claims are not acceptable for these pests. Note that in the future, to obtain any tick claim (including a general claim or any species specific claim), three tick species must be tested.

Efficacy labeling comments related to the requested action:

- 1) Throughout the label for each section of direction for use, change any reference to “ticks” to read “blacklegged and brown dog ticks” (pages 10, 11, 12, 14, 17, 19, 23, 24, 25, 27, 28, 34)
- 2) On pages 11 and 28, change “To Kill Ticks Indoors (including ticks that may transmit Lyme disease)” to read “To kill blacklegged ticks that may transmit Lyme disease and brown dog ticks”.
- 3) On page 34, add “as listed” after “Ticks”.
- 4) The following pages indicate which marketing claims are unacceptable (strikethrough text) or must be modified (red text) based on the efficacy data submitted with this action.

I. Optional Marketing Claims

PowerFlex Sprayer

[Patented] Battery Operated [Powered] Sprayer
Batteries Included

Contains XXX cartridges
[4 oz] Makes one gallon of spray
Each 4oz cartridge makes 1 Gal. of spray

It's easy to apply [thanks to its patented battery operated [powered] sprayer]. Simply point and spray
— NO Mixing, NO Pumping and Best of All NO Hand fatigue. [when packaged accordingly].

[{Optional:} Applicable Packaging]
Spot treat bugs and weeds with this easy to use system+
+when used as directed with the appropriate cartridge

Ready-to-Spray/Concentrate

Ready-to-spray [Ready-to-mix] [lawn] [liquid] [concentrate]
Mixes [dilutes] automatically [as] [when] [you spray]
Hose end concentrate / Easy to spray concentrate
[Attach][Just insert] hose and spray.
Connect & Spray (Sprinkle) (Soak) Applicator
Unique [shower head] sprayer design

General

Easy to use
Water based Formula.
Guaranteed results {or your money back} [Note that "or your money back" cannot be optional.]
Guaranteed to work {or your money back}

Simply point & spray
[No Measuring][Required] No Mixing, No Pumping.
No Mixing, No measuring required.

[No odor][Odorless]
[Non-staining][No odor][Odorless]formula

[4-oz] Covers {treats} [1600] [4000] sq ft
Covers [Treats] over [XXX] sq. ft.

Powered by Zeta {Zeta-C}! [Next generation in insect control]
Formula {insecticide} provides ~~immediate~~ [same day] control
Kills by Contact. Starts acting within Minutes. (except fleas, ticks, and mosquitoes)
Visible activity within Minutes. (except ticks)
Works in Minutes ~~except fleas, ticks, and mosquitoes~~
~~Goes (Starts) to Work Immediately~~
Advanced Killing Action starts within minutes (except fleas, ticks, and mosquitoes)

Kills [insert listed insect] fast! [NOW] kills over [XXX] (except fleas, ticks, and mosquitoes)
insects! Fast Acting! (except fleas, ticks, and mosquitoes)

~~Kills instantly~~

Visible results [in minutes]

Kills by contact – long lasting (except fleas, ticks, and mosquitoes)

Up to [XX] Month Control of [listed insect]! [NOTE: the "listed" insect may not be fleas, ticks, or mosquitoes]

Kills fast and [lasts][protects] up to X months (except fleas, ticks, or mosquitoes)

Keeps protecting up to X months after application (except fleas, ticks, or mosquitoes)

One application – [X] months control (except fleas, ticks, or mosquitoes)

Lasts for weeks (except fleas, ticks, or mosquitoes)

Kills by Contact [and keeps killing {protecting}] {up to} [4] [6] [8] weeks [2] [3] [months] (except fleas, ticks, or mosquitoes)

~~Goes (Starts) to Work Immediately [and lasts] {up to} [4] [6] [8] weeks [2] [3] [months] (except fleas, ticks, or mosquitoes)~~

Up to [4] [6] [8] weeks [2] [3] month control {protection} (except fleas, ticks, or mosquitoes)

Long Lasting [insect] control {protection} (except fleas, ticks, or mosquitoes)

Got [insert listed pest], use [insert Brand Name here][!]

Got [household][insert listed pest], use [insert Brand Name here][!]

[NOW] Kills more insects*

*versus previous label

Kills over XXX common household insects [bugs]

Kills [over XXX] [annoying][damaging] insects [fast] [and prevents new infestations][for up to XX months] (except fleas, ticks, or mosquitoes)

Kills [annoying][damaging] insects and prevents new infestations (except fleas, ticks, and mosquitoes) [NOTE: if only the first clause of the sentence is kept, the exclusion is not needed]

Kills listed common household [ants][roaches][insects][bugs]

Kills Ants, Roaches, Spiders and Other Home Invading Pests as listed

Kills Carpenter Ants and other listed [ant][roaches][insect][bug] species {by Contact!}

~~Starts to work immediately and keeps protecting up to 12 months*~~

Kills by contact and keeps killing up to 3 months (except fleas, ticks, and mosquitoes)

Kills stink bugs

Reduces annoyance from flying pests as listed

[Kills] Controls hard to kill [tough] [insects] [pests] [plus fire ants] as listed

Kills ticks, mosquitoes and other invading [pests][insects] [NOTE: add "listed" before "invading"]

Kills ticks and mosquitoes

Kill [annoying] [damaging] [insects] [pests] and reclaim your [lawn][home] [today!]

Kills blacklegged ticks that may transmit Lyme Disease and brown dog ticks.

~~Kills ticks [including ticks that may transmit Lyme Disease]~~

Kills mosquitoes [including mosquitoes [that may transmit [West Nile Virus] and [Chikungunya Virus]]

Kills [insert listed insect] [NOTE: listed insect may not be ticks]

Kills [insert listed insect] and other listed pests [insects] [NOTE: listed insect may not be ticks]

Kills [ants] [beetles] [chinch bugs] and other listed pests {insects} [NOTE: listed insect may not be ticks]

~~Kills ticks [including ticks that may transmit Lyme Disease]~~

Indoor

Keeps Killing Ants {for} up to [3][6][9] months {indoors}

Provides up to [3] months [ant][roach][~~insect~~][~~bug~~] Control {indoors}

Reclaim your home [indoors][today] from [annoying][destroying][ants][roaches][insects][bugs][!]
Kills Home Invading Insects [pests] [ants]

Keeps Bugs Out!

Up to 12 Month Control Indoors* (except ticks) [NOTE: The reason mosquitoes and fleas are not excepted here is because they are not listed as an indoor pest for this product]
[*Listed Insects]

F6570 EW concentrate is a convenient [liquid] spray that protects your home from invading insects
— kills ants by contact and keeps killing [ants][~~insects~~][~~bugs~~] [inside] for up to [3][6][9] months.

{KILLS: Ants, Roaches, Spiders and Other Home Invading Pests as listed.}
{USE: Indoors as a spot treatment}

Outdoor

Can be used as an outdoor barrier treatment (except for fleas, ticks, and mosquitoes)
Kills [insert listed insect] outside so they can't come inside!
For outdoor use

Protects your lawn for up to [XX] months! (except from fleas, ticks, and mosquitoes)
Use on lawns [and gardens] [Outdoor Surfaces][plants] [vegetables][flowers][trees] [Shrubs]

[Home Perimeter][Lawns][shrubs][ornamentals][decks][home siding][patio][driveway][ornamentals]

Tough on [insert listed insects], gentle on [your] lawn [or garden] [plants] [shrubs] [vegetables] [fruits] [edibles] [flowers][trees][ornamentals][home][concrete surfaces][brick][patio][wood][siding][deck]

Won't harm [your] lawn [or garden] [plants] [shrubs] [vegetables] [fruits] [edibles] [flowers][trees][ornamentals][home][concrete surfaces][brick][patio][wood][siding][deck]

Kills lawn [and garden] [invading] pests {insects} [including] [ants] [aphids] [armyworms] [beetles] [cutworms] [fruit flies] [Japanese beetles] [chinch bugs] [caterpillars] [sod worms] [squash bugs] [white flies] and other listed pests {insects}

Kills [ants] [beetles] [Japanese beetles] [chinch bugs] [caterpillars] [sod worms] [white flies] and other listed pests {insects}

Control {Kills} lawn {invading} damaging insects {pests}[plus fire ants] as listed

Protects lawn from common pests {insects} as listed
Stops {prevents} lawn damage [from insects {pests}] as listed
[simple] [easy] one [step] [application] lawn protection
Kills nuisance pests outdoors [and on your lawn] [before they can come inside] [NOTE: add "listed" here]

Reclaim your lawn [outdoors] [garden] [today] from [annoying] [damaging] [insects] [bugs] [pests]
Kill [annoying] [damaging] [insects] [pests] and reclaim your lawn [garden] [today!]
Don't let insects {bugs} feed on your lawn another day.

Kills Fire Ants by contact [and prevents new mounds from forming] up to [4] [weeks].
Kills the Queen. Kills the Mound [colony]

Kills Fire Ants by Contact. [and keeps killing for [4] weeks]].
Kills colony in 24 hrs. Starts killing Fire Ants Immediately.

Long Lasting Control of fire ants.
Prevents new mounds from forming up to [4] weeks
One application lasts {protects} for [4] weeks against fire ants

[4-oz] [1-quart / 32-oz] [XX oz] Covers {treats} 2133 [4267] [1600] [12,800] [4000] [32,000] [XX] sq.ft.
[of lawn]
[15%] 25% [50%] more coverage [than standard] [quart]
[32 oz] [1 quart] [Ready to Spray][concentrate] Makes over 2[4] [8] [10] [12] [32] [gallons] of liquid [spray]
[32 oz] [1 quart] [Ready to Spray][concentrate] Makes up to [2] [4] [8] [13] [32] [gallons] of liquid [spray]

Kills [a wide range of listed crawling and flying] wood-infesting pests
Protects your home, deck and other wood structures from wood-destroying insects
Kills Wood-Destroying Insects [by Contact][Fast]
Home foundation treatment
Kills termites, carpenter ants, carpenter bees, wood boring beetles and more*
*listed insects
Kills wood-destroying insects outside, so they can't come inside
Kills termites & carpenter ants outside, so they can't come inside

Treat for [Lawns][Home Perimeter Treatment][Outdoor Surfaces][shrubs][ornamentals][decks][home siding][patio][driveway]
Kills [listed pests] outside, so they can't come inside
Kills [damaging][harmful] [listed pests] [fast] (except fleas, ticks, and mosquitoes)

Protect your [home] from [wood destroying insects][termites & carpenter ants]

Protects edibles from insect damage
Keeps protecting up to {2 weeks} up to one day before harvest* (except fleas, ticks, and mosquitoes)
Will not harm plants [or blooms]
[Developed] for use on edibles [and flowers]
[Specially] formulated for [use on more than 100 types of] fruits and vegetables
Kills Japanese Beetles, Aphids, hornworms and other listed pests [up to one day before harvest*]
*for listed fruit and vegetable plants
Specially formulated for use on more than 100 types of fruits and vegetables
Reclaim your lawn [garden] [outdoors] [today] from [annoying] [damaging] [insects] [bugs] [pests]
Kill [annoying] [damaging] [insects] [pests] and reclaim your lawn [garden] [today!]
Don't let insects {bugs} feed on your lawn [garden] another day.
Reclaim your garden!
Use until one day before harvest
Tough on [listed insect], gentle on [shrubs] [vegetables] [gardens]

Fire Ants

1. Liquid Drench Concentrate
2. Kills by Contact
3. ~~Destroys Entire Mound in Minutes~~

Kills the queen and the Colony [the Mound]
 Fire Ant Mound Drench
 Ready-to-spray [Mound Drench]
 Fast Acting [~~Mound Treatment~~]
 [~~Destroys~~][Kills] Stubborn Mounds [in Minutes]
 Treats up to [40] Mounds
 Treats up to [XX] Mounds
 32 oz. Bottle Treats 40 Mounds
 Kills Fire Ants in minutes
 Kills the Queen
 Destroys the mound
 Eliminates Fire Ant colony
 Destroys entire colonies
 Kills the Queen and entire colony
 Can be used around flowers, shrubs, trees
 Kills (controls) mound in (5) minutes
 Will not harm your [lawn][garden][grass][trees][shrubs][yard][ornamentals]
~~No Mound Relocation~~
~~Kills fire ants fast~~
 Destroys [Kills] the mound and the queen
 Prevents new mounds from forming
 Kills insects above and below the ground
 Kills visible and hidden mounds

II. PowerFlex Sprayer

AMDRO DELIVERY SYSTEM

[When Packaged Accordingly:]

AMDRO Battery Operated [Powered] Sprayer

SPRAYER: USE DIRECTIONS

The [AMDRO Spray Delivery System Name] is a patented innovative home lawn, landscape, and perimeter tank spray system. Spot treat [[bugs] [and][or] [weeds]] with this easy to use system.

1. Unscrew the tank cap and fill the tank with water up to the one gallon indicator. [The tank holds one gallon of water.]
2. Remove the [sprayer][wand][applicator] from the tank holster and unfold the [sprayer][wand][applicator].
3. Select the [cartridge][bottle][insecticide] labeled for intended use. READ THE ENTIRE PRODUCT LABEL PRIOR TO USE.
4. Remove the cap from the [cartridge][bottle][insecticide]. [Each [cartridge][bottle] contains 4 oz. of [product][liquid].] [Each 4 oz. [cartridge][bottle] of concentrate makes one gallon of [liquid][ready to use] spray.]
5. Insert the [cartridge][bottle][insecticide] into the top of the sprayer and twist until tight.
6. Press the trigger to spot spray [bugs][weeds] as listed on the product label.